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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,174	03/23/2004	Takamitsu Kawai	119212	2164

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EXAMINER

NICHOLSON III, LESLIE AUGUST

ART UNIT	PAPER NUMBER
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3651

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,174	KAWAI, TAKAMITSU	
	Examiner	Art Unit	
	Leslie A. Nicholson III	3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 8,9,16-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/23/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/6/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is a first action on the merits of application 10/806174.

Election/Restrictions

2. Applicant's election with traverse of species I (figs.2,3,5-7 and claims 1-7,10-15) in the reply filed on 8/23/2005 is acknowledged. The traversal is on the ground(s) that "...the search and examination of the entire application could be made without serious burden". This is not found persuasive because the argument is germane to restriction of invention. When making a restriction of species, it is not necessary for the examiner to show separate classification, and therefore, proof of burdensome search. See MPEP 808.01(a).

The requirement is still deemed proper and is therefore made FINAL.

3. Claims 8-9 and 16-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8/23/2005.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "45" has been used to designate both an outside support member (fig.4A) and a radial outer end (fig.3,5-10,12). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

The use of the trademark TEFLON (P20/L11) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

It is unclear what is meant in the disclosure by the use of the word "deflex" (P4/L23,26). Is the intended word "flex"?

It is unclear what the unit "gF", to describe the spring load (P25/L21,24,26), represents. What is this unit?

Appropriate correction is required.

Claim Objections

6. Claim 6 is objected to because of the following informalities:

It appears as though the word "said" should be placed between "of" and "drive" in line 5 of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1,2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Rider USP 5,653,439.

Rider discloses a similar feeding device comprising:

Regarding claim 1,

- a drive roller (40) having an annular recess formed in an outer circumferential surface thereof (fig.2)
- a driven roller (30) rotatably held and positioned relative to said drive roller such that a radially outer end portion of said driven roller is positioned within said annular recess of said drive roller so that said radially outer end portion of said driven roller overlaps with a radially outer end portion of said drive roller (fig.2)
- wherein said driven roller is displaceable at least in a direction away from said drive roller, so that the recording medium is fed to pass between said drive roller

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and said driven roller, with the recording medium being gripped by said radially outer end portion of said driven roller and said radially outer end portion of said drive roller (C3/L36-45)

- an overlap-amount limiter (20) including a contact portion which is positioned within said annular recess and which is, during absence of the recording medium between said drive roller and said driven roller, held in contact at a surface thereof with said radially outer end portion of said driven roller (fig.2)

Regarding claim 2,

- a biaser (50)

Regarding claim 4, wherein

- said drive roller is disposed on a downstream side, as viewed in said feed direction, of a recording portion (fig.1,5) (C4/L49-59)

Claim 1-3, and 6, as best understood by the examiner (see ¶6), are rejected under 35 U.S.C. 102(b) as being anticipated by Umeda JP 09086749 A.

Regarding claim 1,

- a drive roller (14) having an annular recess (14d) formed in an outer circumferential surface thereof (fig.4)
- a driven roller (16) rotatably held and positioned relative to said drive roller such that a radially outer end portion of said driven roller is positioned within said annular recess of said drive roller so that said radially outer end portion of said driven roller overlaps with a radially outer end portion of said drive roller (fig.4)

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- wherein said driven roller is displaceable at least in a direction away from said drive roller, so that the recording medium is fed to pass between said drive roller and said driven roller, with the recording medium being gripped by said radially outer end portion of said driven roller and said radially outer end portion of said drive roller (fig.4b)
- an overlap-amount limiter (20a) including a contact portion which is positioned within said annular recess and which is, during absence of the recording medium between said drive roller and said driven roller, held in contact at a surface thereof with said radially outer end portion of said driven roller (fig.4)

Regarding claim 2,

- a biaser (28)

Regarding claim 3, wherein

- said biaser includes a flexible shaft holding said driven roller mounted thereon, such that said driven roller is rotatable relative to said flexible shaft (fig.4)

Regarding claim 6, wherein

- said surface of said contact portion of said overlap-amount limiter (20a) is positioned between said outer circumferential surface of said drive roller and a bottom surface of said annular recess of drive roller (fig.4)

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 1,2,6,12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn USP 5,897,259 in view of Uchikata USP 5,961,234.

Ahn discloses a similar feeding device comprising:

Regarding claim 1,

- a drive roller (55) having an annular recess (62A) formed in an outer circumferential surface thereof (fig.3)
- wherein said driven roller (62) is displaceable at least in a direction away from said drive roller (C3/L53-56), so that the recording medium (P) is fed to pass between said drive roller and said driven roller, with the recording medium being gripped by said radially outer end portion of said driven roller and said radially outer end portion of said drive roller (fig.3)
- an overlap-amount limiter (60A) including a contact portion which is positioned within said annular recess (fig.3)

Ahn does not expressly disclose a driven roller rotatably held and positioned relative to said drive roller such that a radially outer end portion of said driven roller is positioned within said annular recess of said drive roller so that said radially outer end portion of said driven roller overlaps with a radially outer end portion of said drive roller

nor does Ahn disclose the overlap-amount limiter where during absence of the recording medium between said drive roller and said driven roller, held in contact at a surface thereof with said radially outer end portion of said driven roller.

Uchikata teaches a driven roller (41) rotatably held and positioned relative to said drive roller such that a radially outer end portion of said driven roller is positioned within said annular recess of said drive roller so that said radially outer end portion of said driven roller overlaps with a radially outer end portion of said drive roller (fig.4) and also teaches the overlap-amount limiter where during absence of the recording medium between said drive roller and said driven roller, held in contact at a surface thereof with said radially outer end portion of said driven roller (fig.4) for the purpose of permitting bowing of the sheet at the annular recess for sufficient gripping.

At the time of invention it would have been obvious to one having ordinary skill in the art to rotatably hold and position a driven roller relative to said drive roller such that a radially outer end portion of said driven roller is positioned within said annular recess of said drive roller so that said radially outer end portion of said driven roller overlaps with a radially outer end portion of said drive roller and have the overlap-amount limiter, where during absence of the recording medium between said drive roller and said driven roller, is held in contact at a surface thereof with said radially outer end portion of said driven roller, as taught by Uchikata, in the device of Ahn, for the purpose of permitting bowing of the sheet at the annular recess for sufficient gripping.

- Regarding claim 12, Ahn discloses all the limitations of the claim, but does not

expressly disclose a recording portion which records an image on a recording medium and which is disposed on an upstream side of said feeding device as viewed in said feed direction, a platen which is opposed to said recording portion and supports the recording medium, or a media exit portion through which the recording medium exits from said apparatus after the image is recorded on the recording medium by said recording portion.

Uchikata teaches a recording portion (7) which records an image on a recording medium (S) and which is disposed on an upstream side of said feeding device as viewed in said feed direction, a platen (34) which is opposed to said recording portion and supports the recording medium, and a media exit portion through which the recording medium exits from said apparatus after the image is recorded on the recording medium by said recording portion (C6/L7-11) (fig.3) for the purpose of completing the system of an inkjet recording apparatus.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ a recording portion which records an image on a recording medium and which is disposed on an upstream side of said feeding device as viewed in said feed direction, a platen which is opposed to said recording portion and supports the recording medium, and a media exit portion through which the recording medium exits from said apparatus after the image is recorded on the recording medium by said recording portion, as taught by Uchikata, in the device of Ahn, for the purpose of completing the system of an inkjet recording apparatus.

Regarding claim 13, Ahn further discloses the overlap-amount limiter including a tongue member which extends in said feed direction and which has a proximal end portion positioned on an upstream side of said driven roller as viewed in said feed direction (fig.3).

Regarding claim 2, Ahn further discloses a biaser (70).

Regarding claim 6, Ahn further discloses said surface of said contact portion of said overlap-amount limiter positioned between said outer circumferential surface of said drive roller and a bottom surface of said annular recess of drive roller (fig.3).

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn USP 5,897,259 in view of Uchikata USP 5,961,234 and in further view of Asano USP 5,291,224.

Ahn discloses all the limitations of the claim, but does not expressly disclose the tongue member extending from the platen or the tongue member formed integrally with the platen.

Asano teaches the tongue member extending from the platen (7) (fig.1,8,9) and the tongue member formed integrally with the platen for the purpose of providing a smooth and space-saving guide from the platen to the feeding device.

At the time of invention it would have been obvious to one having ordinary skill in the art to have the tongue member extending from the platen and the tongue member formed integrally with the platen, as taught by Asano, in the device of Ahn, for the

purpose of providing a smooth and space-saving guide from the platen to the feeding device.

Claims 3, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rider USP 5,653,439 in view of Hirabayashi USP 6,325,560.

Rider discloses all the limitations of the claim (see ¶7), but does not expressly disclose the biaser including a flexible shaft holding said driven roller mounted thereon, such that said driven roller is rotatable relative to said flexible shaft.

Hirabayashi teaches a biaser including a flexible shaft (79) holding said driven roller (59) mounted thereon, such that said driven roller is rotatable relative to said flexible shaft (fig.6) for the purpose of allowing the driven roller to freely move upward and downward against its opposing print roller (C7/L40-46).

At the time of invention it would have been obvious to one having ordinary skill in the art to have employed a biaser including a flexible shaft holding said driven roller mounted thereon, such that said driven roller is rotatable relative to said flexible shaft, as taught by Hirabayashi, in the device of Rider, for the purpose of allowing the driven roller to freely move upward and downward against its opposing print roller.

Regarding claim 10, Rider further discloses a drive roller having a plurality of annular recesses, a plurality of driven rollers, and a plurality of overlap-amount limiters (fig.1) but does not expressly disclose a plurality of flexible shafts.

Hirabayashi further teaches a plurality of flexible shafts (fig.6) for the purpose of depressing a recording medium along its width.

At the time of invention it would have been obvious to one having ordinary skill in the art to have employed a plurality of flexible shafts, as taught by Hirabayashi, in the device of Rider, for the purpose of depressing a recording medium along its width.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn USP 5,897,259 in view of Uchikata USP 5,961,234 and in further view of Taruki USP 6,254,078.

Ahn discloses all the limitations of the claim, but does not expressly disclose the contact portion of the overlap-amount limiter formed of a material which is harder than a material forming the driven roller.

Taruki teaches the contact portion of the overlap-amount limiter formed of a material which is harder than a material forming the driven roller for the purpose of not obstructing the conveyance by the driven roller (C2/L54, C6/L66-67, C7/L1-4).

At the time of invention it would have been obvious to one having ordinary skill in the art to have the contact portion of the overlap-amount limiter formed of a material which is harder than a material forming the driven roller, as taught by Taruki, in the device of Ahn, for the purpose of not obstructing the conveyance by the driven roller.

Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rider USP 5,653,439 in view of Bekki USP 5,606,357.

Regarding claim 7, Rider discloses all the limitations of the claim (see ¶7), but does not expressly disclose the feeding device wherein the driven roller is formed of a resin.

Bekki teaches a driven roller formed of a resin (C4/L24-27) in order to extend the wear-life of the driven roller.

At the time of invention it would have been obvious to one having ordinary skill in the art to form a driven roller of a resin, as taught by Bekki, in the device of Rider, in order to extend the wear-life of the driven roller.

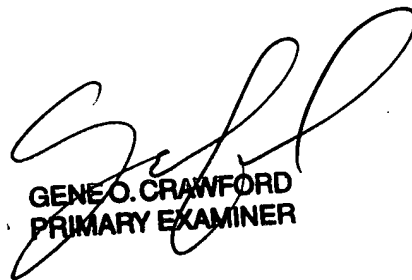
Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie A. Nicholson III whose telephone number is 571-272-5487. The examiner can normally be reached on M-F, 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L.N.
9/12/2005


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